Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Amendment of Part 90 of the Commission's Rules	)	WT Docket No. 05-62
To Provide for Flexible Use of the 896-901 MHz	)	
and 935-940 MHz Bands Allotted to the Business	)	
and Industrial Land Transportation Pool	)	
	)	
Oppositions and Petitions for Reconsideration of	)	DA 04-3013
900 MHz Band Freeze Notice	)	

To: The Commission

REPLY COMMENTS OF NORTHERN INDIANA PUBLIC SERVICE COMPANY

NORTHERN INDIANA PUBLIC SERVICE COMPANY

By: Jeffrey M. Karp
Eliot J. Greenwald.
Swidler Berlin LLP
3000 K Street, N.W., Suite 300
Washington, D.C. 20007
(202) 424-7500 (phone)
(202) 424-7647 (fax)

Its Attorneys

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SUMMARY

Northern Indiana Public Service Company ("NIPSCO") is an electric power and gas utility serving approximately 430,000 electric customers and 700,000 gas customers in 30 counties covering approximately 12,000 square miles in northern Indiana. NIPSCO supports the Joint Comments filed by the Association of American Railroads, the American Petroleum Institute, MRFAC, Inc., the National Association of Manufacturers, and the United Telecom Council. In particular, NIPSCO urges the Commission to (1) adopt for 900 MHz the same interference protection rules that were adopted for 800 MHz; (2) set aside 2.5 MHz of spectrum for private internal use to be licensed on a site-by-site frequency coordinated first come, first served basis; and (3) require that geographic-area-based licensees coordinate their frequency usage with co-channel adjacent incumbents. NIPSCO also suggests that the spectrum that is auctioned be licensed by Basic Economic Area ("EA"), that geographic separation requirements be adopted as proposed by the Commission, that the 40 dBμV/m field strength contour of incumbent licensees be protected based upon the originally licensed sites at maximum effective radiated power ("ERP"), that incumbents be permitted to modify and add sites whose 22 dBμV/m interference contour stays within the composite 22 dBμV/m interference contour based upon the originally licensed sites at maximum ERP, and that the pending applications for commercial use of the 900 MHz spectrum be dismissed.

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Northern Indiana Public Service Company ("NIPSCO"), by its attorneys and pursuant to Section 1.415(c) of the Commission's rules,[1] hereby files its reply comments in response to the Notice of Proposed Rulemaking and Memorandum Opinion and Order, FCC 05-31, released February 16, 2005 ("NPRM"). By Order, DA 05-1084, released April 14, 2005, the time period for filing reply comments was extended until June 2, 2005. NIPSCO supports the "Joint Comments" filed by the Association of American Railroads ("AAR"), the American Petroleum Institute ("API"), MRFAC, Inc. ("MRFAC"), the National Association of Manufacturers ("NAM"), and the United Telecom Council ("UTC") ("collectively the Joint Commenters") on May 18, 2005.

[1] 47 C.F.R. § 1.415(c).

I. Background

A. Northern Indiana Public Service Company

NIPSCO is a critical infrastructure company providing electric power and gas to residential, commercial, governmental, and industrial customers in northern Indiana. NIPSCO serves approximately 430,000 electric customers and 700,000 gas customers in 30 counties covering approximately 12,000 square miles. NIPSCO's operations affect virtually every aspect of daily life within its service territory, as well as the ability of the public safety and health services communities to deliver their critical services to the public.

NIPSCO relies extensively on its wireless radio facilities to communicate with field personnel and monitor, alarm and maintain its electric power and gas distribution systems. Its land mobile communications network was installed approximately 13 years ago at a cost of $19.6 million and helps assure the safe and efficient generation and distribution of electric power, and distribution of gas. NIPSCO requires reliable, high quality communications to ensure that the monitoring of its system and the operation of necessary alarms are dependable. Further, during the normal course of business, and particularly during times of emergency, NIPSCO's radio facilities are critical to NIPSCO's ability to safely dispatch crews and assure the continued delivery of electric power throughout its service territory. NIPSCO also provides electric power and gas to many entities that provide vital services utilized on a daily basis, such as telecommunications companies, government agencies, and transportation providers (*e.g.*, mass transportation and airports).

NIPSCO's 900 MHz facilities are used for both voice and data communications. NIPSCO relies on its 900 MHz facilities to service its power and gas distribution systems and to respond to emergencies, such as ice storms and thunderstorms, as well as activities that potentially threaten life, health, and property. In times of emergency, commercial wireless

systems are often unable to handle the large volume of calls, and call-blocking occurs. The citizens of northern Indiana expect rapid restoration of power during times of outage, and the 900 MHz radio system is a critical component of NIPSCO's ability to respond quickly and safely. NIPSCO depends upon its internal wireless infrastructure to ensure that it has reliable and readily available radio communications so that it can quickly respond not only to emergencies, but also to other vital matters that affect its power network and customers.

B. The Notice of Proposed Rulemaking and Joint Comments

In the NPRM the Commission proposed rules for commercial use of the 199 channels allocated to the Business and Industrial Land Transportation ("B/ILT") Pools in the 896-901/935-940 MHz bands. The Commission also proposed to license the remaining spectrum in geographic areas using auctions.

The Joint Comments emphasize the need to maintain the Commission's geographic separation requirements as a means to help protect incumbents from co-channel interference. They also explain the need to adopt at 900 MHz the same interference protection criteria recently established at 800 MHz to avoid the 800 MHz interference problems repeating themselves at 900 MHz. Nextel opposes adopting the 800 MHz interference protection rules at 900 MHz, and the Joint Comments address Nextel's objections and explain the critical need for strict interference protection rules at 900 MHz. The Joint Comments propose that, in addition to the geographic separation requirements, the incumbent licensee 40 dBμV/m field strength contours based on maximum effective radiated power ("ERP") be protected; however, the Joint Comments also propose that incumbents be permitted to make system modifications, provided that the composite 22 dBμV/m interference contours based on maximum ERP at the original sites are not increased.

The Joint Comments propose that the Commission set aside 99 channels for internal private use to be licensed according to the current rules for frequency-coordinated site-based

licensing. They propose eliminating channel loading requirements, but that applicants be limited to applying for a maximum of ten overlapping channels at a time. The Joint Comments propose that auctioned frequencies be licensed by Basic Economic Area ("EA") in 10-channel blocks.

In the reply comments below, NIPSCO supports the Joint Comments. In particular NIPSCO supports the need to protect incumbents from interference by adopting at 900 MHz the interference protection criteria recently adopted at 800 MHz, maintaining separation distances, protecting the 40 dBμV/m contours of incumbents, and permitting incumbent system modifications provided that the 22 dBμV/m contours do not increase. NIPSCO also supports the need to reserve 99 channels for B/ILT use and auctioning the non-set aside spectrum by EAs rather than Major Economic Areas ("MEAs").

II. Treatment of Incumbents and Interference Protection

A. Maintain Geographic Separation Requirements

NIPSCO agrees with the Commission's proposal at para. 34 of the NPRM and with the Joint Comments that geographic area licensees should afford protection to incumbent B/ILT systems by either (1) locating their facilities at least 113 km (70 miles) from the incumbent's facilities, (2) complying with the Commission's short-spacing requirements, or (3) reaching agreement with the incumbent on the location and operating parameters of the new facilities. The Commission's proposal is consistent with Section 90.663(a)(1) of the rules,[2] which applies to the geographic area licenses for the 200 SMR pool 900 MHz channels. The requirements of Section 90.621 of the Commission's rules[3] have worked well, and NIPSCO does not see any reason to change these successfully operating rules.

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[2] 47 C.F.R. § 90.663(a)(1).

[3] 47 C.F.R. § 90.621.

B. Adopt Interference Abatement Rules for 900 MHz Identical to those at 800 MHz

The Commission at para. 35 of the NPRM expressed concern that, with the advent of low site, digital SMR systems at 900 MHz, the interference problems experienced at 800 MHz could be experienced at 900 MHz as well. As was expressed in the Joint Comments, NIPSCO shares this concern. The propagation characteristics of the 900 MHz band are nearly identical to the propagation characteristics of the 800 MHz band. However, to make matters worse at 900 MHz, the use of 12.5 kHz channels at 900 MHz as opposed to 25 kHz channels at 800 MHz increases the potential for adjacent channel interference at 900 MHz. Therefore, NIPSCO considers it essential that the Commission adopt interference abatement rules for 900 MHz that are identical to the 800 MHz rules. The failure to impose these rules would result in the 800 MHz problems moving to 900 MHz without an adequate means of resolution.

In its Comments filed on May 18, 2005, Nextel Communications, Inc. ("Nextel") contends that interference abatement policies are unnecessary at 900 MHz because Nextel has not received interference complaints at 900 MHz, that B/ILT licensees at 900 MHz have the resources to deploy robust, interference-resistant systems unlike public safety licensees at 800 MHz, and that the interference abatement procedures adopted at 800 MHz would be unduly burdensome at 900 MHz. The Joint Comments dispute each of the points made by Nextel. NIPSCO agrees with the Joint Comments.

The Joint Comments correctly explain that Nextel has not received complaints at 900 MHz because Nextel has not deployed many customers at 900 MHz. Accordingly, there are not yet enough Nextel iDEN users at 900 MHz to cause an interference problem. The existing situation is consistent with Nextel's experience at 800 MHz, where there was at least a 3-year

period between when Nextel began deploying iDEN systems and it began receiving interference complaints from public safety users.

NIPSCO agrees with the Joint Comments response to Nextel's argument that B/ILT users have the funds to construct robust systems that can withstand interference from iDEN systems. As explained in the Joint Comments, critical infrastructure companies such as NIPSCO do not have excess capital. As a regulated utility, NIPSCO's costs are passed on to ratepayers, and NIPSCO has an obligation to its ratepayers to minimize its costs so that utility rates can be kept as low as possible.

Lastly, Nextel's suggestion that the interference abatement procedures would be unduly burdensome turns on its head longstanding Commission policy. As pointed out in the Joint Comments, although all parties must cooperate with each other to resolve interference problems, it is not the responsibility of the victim of interference to pay to mitigate the interference. Rather, it is longstanding Commission policy that the party who causes the interference must mitigate the interference,[4] even if that party is operating according to its authorized parameters.[5] If Nextel's 900 MHz iDEN system begins to cause interference to NIPSCO's 900 MHz system, then Nextel would be responsible for mitigating the interference. The rules already adopted at 800 MHz, if applied to 900 MHz, would help alleviate interference problems that are bound to arise at 900 MHz.

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4 *See, e.g., Broadcast Corp. of Georgia (WVEU(TV))*, 92 FCC 2d 910 (1982).

5 *See, e.g., WKLX, Inc.*, 6 FCC Rcd. 225 at ¶ 10 (1991); *Broadcast Corp. of Georgia (WVEU(TV))*, 96 FCC 2d 901 (1984).

III. Spectrum Set Aside for Private Internal Use

A. 2.5 MHz of Spectrum Should be Set Aside for Non-Commercial Internal Use Only to be Licensed on a Frequency Coordinated Site-By-Site Basis

NIPSCO agrees with the proposal of the Joint Comments to set aside 99 channels, amounting to 2.5 MHz of spectrum, for non-commercial internal use to be licensed on a frequency coordinated site-by-site basis. When the 900 MHz spectrum was originally allocated in 1986, 6 MHz was allocated to the Public Safety pool, 5 MHz to the Specialized Mobile Radio ("SMR") pool, 2.5 MHz to the Industrial/Land Transportation ("IT") pool, and 2.5 MHz to the Business pool.[6] At the time, the Commission determined that the pool approach ". . . provides a reasonable period of time for potential users with similar types of mobile communications requirements to apply for spectrum without competing against applicants with substantially different types of mobile communications requirements or applicants seeking to establish commercial radio systems."[7] Thus, 99 channels were allocated to the IT pool, 100 channels to the Business pool and 200 channels to the SMR pool.[8] In recognition of this pool structure, the Commission designated the 200 channels in the 900 MHz SMR pool as commercial mobile radio

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6 *Amendment of Parts 2 and 22 of the Commission's Rules Relative to Cellular Communications Systems; Amendment of Parts 2, 15, and 90 of the Commission's Rules and Regulations to Allocate Frequencies in the 900 MHz Reserve Band for Private Land Mobile Use,* 2 FCC Rcd. 1825, 1831 at ¶ 50 (1986).

7 *Id.* at 1831, ¶ 46.

8 47 C.F.R. § 90.617. The IT and Business pools were later combined to become the Business/Industrial Land Transportation ("B/ILT") pool.

service ("CMRS"), but did not change the private radio designation of the B/ILT channels.[9] The FCC completed Auction No. 7 for the 900 MHz SMR frequencies on April 15, 1996.[10]

While the auctioned 900 MHz SMR spectrum remains underutilized, there has been intense utilization of the 900 MHz B/ILT spectrum. Many utilities and other companies that experienced overcrowding of the 800 MHz and lower spectrum, chose to design and build systems at 900 MHz to accommodate their internal communications needs. As discussed, NIPSCO spent $19.6 million building a 900 MHz system. This system is critical for electrical maintenance and restoration and monitoring functions, and is particularly important during periods of power outages resulting from ice storms, thunderstorms and other emergencies.

NIPSCO and other critical infrastructure companies designed and built their 900 MHz systems by coordinating the frequencies that they needed where they needed them. This resulted in intense utilization of the spectrum, because each company was able to squeeze in additional channels, so long as they met the basic spacing requirements or the short-spacing requirements in Section 90.621 of the Commission's rules.[11] Thus, in most metropolitan areas, very few opportunities now exist to obtain additional channels to construct additional facilities at 900 MHz. To the extent that a few channels are still available to squeeze in additional sites or add channels to existing facilities, the Commission should allow the spectrum to remain available for internal use on a site-by-site frequency coordinated basis. That way, utilities and other critical infrastructure companies can obtain these frequencies to satisfy their growing need for spectrum.

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9 *Implementation of Sections 3(n) and 332 of the Communications Act; Regulatory Treatment of Mobile Services*, 9 FCC Rcd. 7988, 8050 at ¶ 113 (1994).

10 *FCC Announces Winning Bidder in the Auction of 1,020 Licenses to Provide 900 MHz SMR in Major Trading Areas,* Public Notice, DA 96-586, April 15, 1996.

11 47 C.F.R. § 90.621.

Therefore, NIPSCO proposes that 2.5 MHz of spectrum be reserved for private, internal use only. Specifically, NIPSCO proposes that the 99 channels originally allocated to the Industrial/Land Transportation pool be reserved. NIPSCO further proposes that these frequencies not be auctioned. Rather, NIPSCO suggests that they continue to be assigned as in the past – on a frequency coordinated, first come, first served basis as the channels are needed by the applicants. This approach is much more spectrum efficient than auctioning arbitrary blocks of channels based on EAs or other pre-defined markets. Instead, companies must frequency-coordinate and apply for the channels as the need arises.

On the other hand, if the Commission were to auction blocks of spectrum, companies would purchase more channels and more area than they need because the spectrum would be sold in pre-packaged units. Moreover, an auction of all or substantially all of the 900 MHz spectrum would result in critical infrastructure companies competing against commercial wireless providers, as was the case in the recent multiple address system ("MAS") auction. This situation can result in critical infrastructure companies either paying higher prices for spectrum or being unable to obtain spectrum that they desperately need. Either result would be inimical to the public interest. If the critical infrastructure companies pay higher prices for spectrum, the cost is passed on to their customers in the form of higher utility rates. If the critical infrastructure companies do not obtain the spectrum they need, service to customers will suffer. By way of example, because the commercial users of spectrum were willing to pay higher prices in the MAS auction, NIPSCO was unable to obtain any frequencies in the Chicago-Gary-Kenosha, IL-IN-WI Basic Economic Area, a portion of which includes NIPSCO's service area.

B. Reserving 2.5 MHz for Private Internal Use Will Serve the Public Interest

NIPSCO's proposal to reserve 99 channels for private, internal use will advance the public interest because it reserves some capacity for critical infrastructure companies who need

the spectrum to further their mission. For example, when there is a power blackout due to a hurricane, thunderstorm or ice storm, the citizens of the area place a high priority on electrical restoration and often complain when power is not restored on a timely basis. The radio spectrum used by the utilities is a critical component of the electrical restoration process. The radios are needed to dispatch crews, and for safety reasons, the crews are required to have accessible radio contact when they climb utility poles and towers. NIPSCO requires its own communications system and cannot rely on CMRS carriers because CMRS systems are often overloaded during times of emergency – the very time when a critical infrastructure company needs reliable communications the most.

Reserving 99 channels for private internal use still leaves 300 channels for CMRS use, which comprises three-quarters of the total 900 MHz channels. These 300 channels, which include the 200 under-utilized 900 MHz SMR pool channels auctioned in 1996 and the 100 channels originally allocated to the Business pool, will provide the additional SMR capacity needed during the 800 MHz rebanding process.

IV. Geographic Areas and Grandfathering Provisions

A. The Commission Should License Basic Economic Areas

In the NPRM, the Commission asked whether the geographic size of the licenses should be based upon Major Economic Areas ("MEAs") or smaller areas such as Basic Economic Areas ("EAs"). NPRM at paras. 21-25. As advocated in the Joint Comments, NIPSCO supports smaller areas such as EAs. The problem with larger areas is that applicants are forced to obtain much larger land areas than they need, which results in the spectrum remaining unused in the portions of the market that are not part of their area of interest. For the same reason, larger areas limit the ability of incumbents to participate in geographic area licensing because incumbents may not have the budgets to obtain coverage beyond their service areas. In the case of utilities,

the purchase price of spectrum is passed on to the ratepayers as a cost of doing business, and utilities are obligated to consider ratepayer interests by keeping costs as low as possible. Moreover, past experience shows only limited use of the partitioning option. Thus, it is preferable that the Commission auction smaller areas, such as EAs, so that applicants can obtain licensing areas that resemble more closely the areas that they intend to serve. To the extent that EAs are too small for certain applicants, they can obtain multiple contiguous EAs in the auction.

B. Adopt Grandfathering Provisions for Incumbents

The Commission proposed at para. 36 of the NPRM to define the existing protected service area of an incumbent B/ILT system by its originally-licensed 40 dBµV/m field strength contour. NIPSCO agrees with the Joint Comments that the incumbent protected service area should be the 40 dBµV/m field strength contour based on the maximum permissible ERP at the originally licensed site. As stated in the Joint Comments, Section 90.621(b) of the rules[12] is premised on protecting the 40 dBµV/m service contour of 800 MHz and 900 MHz facilities. However, as proposed in the Joint Comments, NIPSCO supports permitting incumbents to modify or add sites so long as the composite 22 dBµV/m interference contour of the original sites based on the maximum ERP is not exceeded. Use of the 22 dBµV/m contour would make the 900 MHz rules consistent with the 800 MHz rules, and would afford incumbents maximum flexibility to make changes to their systems without encroaching on other incumbents or geographic area licensees.

C. Adopt Field Strength Limits for Geographic Area Licensees Subject to Minimum Separation Distances and Coordination with Adjacent Licensees

NIPSCO agrees with the NPRM proposal at paras. 43-44 to adopt 40 dBµV/m as the maximum field strength at the geographic licensee's service area border. As discussed above

[12] 47 C.F.R. § 90.621(b).

and stated in the text of proposed revised rule Section 90.671,[13] in order to protect incumbents from co-channel interference, this maximum field strength must be further limited by the geographic separation distances found in Section 90.621(b) of the Commission's rules.

The text of the proposed revised rule Section 90.671 also states in pertinent part: "Geographic-area-based licensees are also required to coordinate their frequency usage with co-channel adjacent geographic-area-based licensees and all other affected parties." NIPSCO considers it critical that the Commission make it clear that "all other affected parties" includes co-channel incumbent licensees. Specifically, just as geographic-area-based licensees must coordinate with other co-channel adjacent geographic-area-based licensees, they should be required to coordinate with co-channel adjacent incumbents as well. By coordinating with the co-channel adjacent incumbents, the incumbents will be aware of the operations of the geographic-area-based licensees and will be able to monitor for and protect themselves from interference.

V. Pending Applications

In its comments, Southern Communications Services, Inc. d/b/a SouthernLINC Wireless ("SouthernLINC") advocates the dismissal of the various applications that were filed by ACI 900, Inc. for 900 MHz site-specific licenses prior to the imposition of the 900 MHz licensing freeze.[14] SouthernLINC argues that failure to dismiss the applications will deprive potential bidders of the ability to compete for the spectrum in an auction.

NIPSCO has a more fundamental problem. If any of the applications were filed for channels that the Commission determines to set aside for private internal use, then an applicant

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[13] 47 C.F.R. § 90.671.

[14] *Wireless Telecommunications Bureau Freezes Applications in the 900 MHz Band,* Public Notice, 19 FCC Rcd. 18277 (2004).

that does not intend private internal use would not be qualified for such channels. Dismissing the applications would thus make channels available for NIPSCO and other critical infrastructure companies to expand their internal communication systems. Moreover, to the extent that NIPSCO and other critical infrastructure companies cannot find channels reserved for internal B/ILT use available to meet their spectrum needs, dismissal of the commercial use applications, followed by a period during which critical infrastructure companies can apply (subject to waiver of the licensing freeze) for such channels to be used solely for internal use, would provide critical infrastructure companies with sorely needed spectrum prior to the Commission auctioning the unassigned white spaces. As discussed, NIPSCO and other utilities require the tools, including spectrum, to fulfill their important public service functions, and Commission spectrum policy must be able to satisfy the spectrum needs of utilities.

VI. Conclusion

Northern Indiana Public Service Company supports the Joint Comments filed by AAR, API, MRFAC, NAM and UTC. In particular, NIPSCO urges the Commission to (1) adopt for 900 MHz the same interference protection rules that were adopted for 800 MHz; (2) set aside 2.5 MHz of spectrum for private internal use to be licensed on a site-by-site frequency coordinated first come, first served basis; and (3) require that geographic-area-based licensees coordinate their frequency usage with co-channel adjacent incumbents. NIPSCO also suggests that the spectrum that is auctioned be licensed by Basic Economic Area, that geographic separation requirements be adopted as proposed by the Commission, that the 40 dBμV/m field strength contour of incumbent licensees be protected based upon the originally licensed sites at maximum ERP, that incumbents be permitted to modify and add sites whose 22 dBμV/m interference contour stays within the composite 22 dBμV/m interference contour based upon the originally

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Respectfully submitted,

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/S/

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Eliot J. Greenwald
Swidler Berlin LLP
3000 K Street, N.W., Suite 300
Washington, D.C. 20007
(202) 424-7500 (phone)
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